

PARONYCHIA AHARTII (CARYOPHYLLACEAE),
A NEW SPECIES FROM CALIFORNIA

BARBARA ERTTER

Plant Resources Center, University of Texas,
Austin 78712

ABSTRACT

A tiny annual *Paronychia* that has been known from the Sacramento Valley of California for 46 years is described as ***Paronychia ahartii***. Its affinities appear to be with the Mediterranean *P. arabica*, from which it is nevertheless clearly differentiated by the erect, scarios, bilobed apices of its sepals.

In the course of studying a new variety of dwarf rush from the Peter Ahart ranch in Butte County, California, the following inconspicuous *Paronychia* was brought to my attention with the request that I provide a name and description for it. The request is herewith fulfilled.

***Paronychia ahartii* Ertter, sp. nov.**

Herbae annuae minutae glomerulum argenteum ca. 1 cm diam. efformantes. Sepala elliptico-lanceolata basi pilis uncinatis induta, costa in aristum ca. 1 mm longa exeunti, marginibus latis hyalinis ultra costam productis et inter se in limbum erectum bilobum ca. 1 mm longum coadunatis (Fig. 1).

Inconspicuous annual plants 0.5–1.2 cm tall, 0.5–1.8 cm across, consisting of a tight silvery glomerule dominated by stipules, bracts, and sepals, arising from a slender taproot; *leaves* linear to oblanceolate, drying reddish-stramineous, 2.5–7.5 mm long, 0.5–1.2 mm wide, often inconspicuously ciliate, tipped with a colorless awn to 0.8 mm long; *stipules* and *bracts* similar, conspicuous, concealing flowers, scarios, broadly ovate, 3–6 mm long, 2–4 mm wide, acute to acuminate; *flowers* few, sessile, 4.2–5 mm long; *hypanthium* 0.5–1 mm long, often dark red-brown resinous-papillate below the free portion of the sepals; *sepals* 5, lanceolate to elliptic, 3.5–4.5 mm long, 1.5–2.5 mm wide, the herbaceous midrib linear, 2.5–3 mm long, 0.2–0.5 mm wide, green to stramineous, sometimes red-flecked proximally, terminated by a spreading colorless awn 1–1.5 mm long, the edges of the midrib thickened, covered with upwardly spreading hairs with tightly coiled tips, the conspicuous scarios margins 0.5–1 mm wide on each side of the midrib, united beyond the midrib

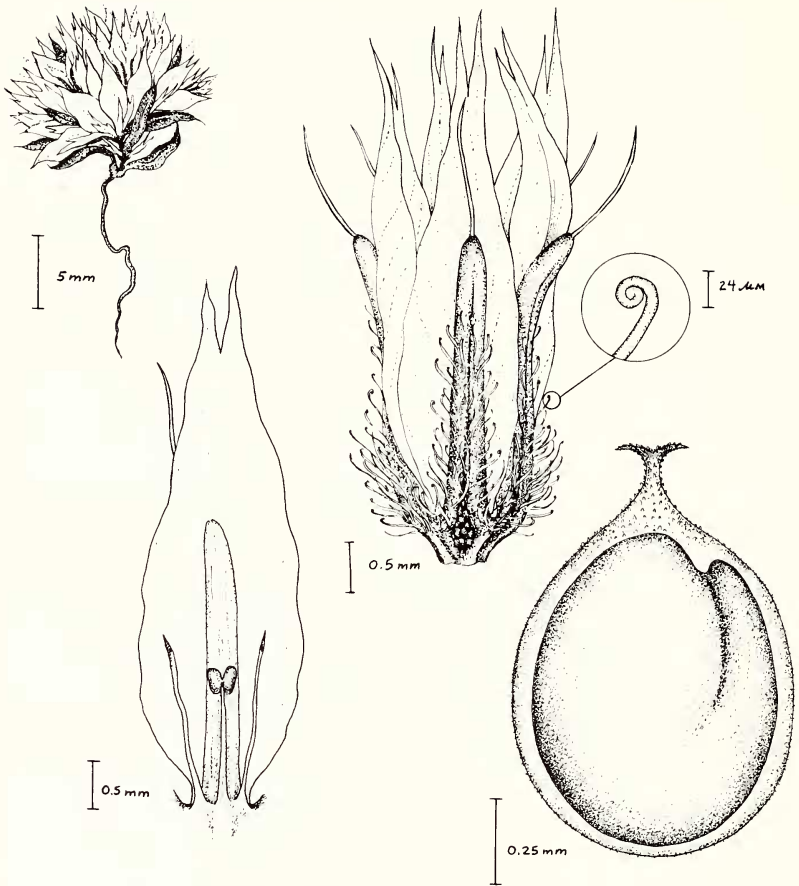


FIG. 1. *Paronychia ahartii*. A. Habit. B. Flower, with enlargement of crozier-tipped hair. C. Inside of sepal, showing stamen and staminodia. D. Utricle with seed.

to form an erect scarious tip 1–1.5 mm long, the apical 0.5 mm bilobed; *staminodia* (petals?) filiform, ca. 1 mm long, equaling or exceeding the stamens; *filaments* flattened, 0.5–1 mm long; *anthers* ovoid, 0.2 mm long, orange; *styles* (including stigmatic portion) ca. 0.5 mm long, bilobed, persistent; *fruit* a thin-walled utricle with a compressed ovoid body 1.3 mm long and beak ca. 0.5 mm long, the apex papillose; *seed* lenticular, ca. 1 mm long, brown, borne on a flattened curved funiculus ca. 1.5 mm long.

TYPE: CALIFORNIA. Tehama Co., 8.5 mi s. of Corning, rolling plains, 12 Jun 1955, *J. T. Howell 30307*. (Holotype: CAS; isotypes: B, GH, K, NY, RM, TEX, U, US.)

PARATYPES: CALIFORNIA. Butte Co., Ahart Ranch, Honcut, 5

May 1974, *Ahart s.n.* (CAS); same, 8 May 1980, *Ertter et al.* 3326 (NY); 3 mi n. of Chico, 24 Apr 1938, *Hoover* 3242 (CAS); Hwy 99 between Williams and Oroville, 19 Apr 1958, *Langenheim* 4480 (JEPS). Shasta Co., Hwy 44 ca. 11 mi se. of Millville, 23 Apr 1958, *Bacigalupi et al.* 6318 (JEPS, TEX). Tehama Co., ca. 7 mi s. of Corning, 22–23 Apr 1958, *Bacigalupi et al.* 6290 (JEPS, TEX); Jelly's Ferry, 20 May 1942, *Hoover* 5879 (CAS).

Very rare on poor clay of swales and higher ground around vernal pools in the northern Sacramento Valley of Butte, Shasta, and Tehama Counties, California, from 30 to 500 m elevation. Flowering from April to June.

Although this diminutive species has been collected several times since R. F. Hoover first discovered it in 1938, these collections remained unidentified beyond tentative placement in *Paronychia*. Rimo Bacigalupi and Alice Howard worked with the specimens, but no publications resulted from their studies. Although it was suspected of being another example of a Mediterranean annual established in California, with the appearance of Chaudhri's (1968) worldwide monograph of the genus it became evident that the collections did indeed represent a distinctive new species.

In Chaudhri's monograph, *Paronychia ahartii* would be associated with *P. arabica* (L.) Del. subsp. *annua* (Del.) Maire & Weiller var. *annua* of the Middle East and north Africa. According to Chaudhri, *P. arabica* "is the most variable species of this genus, and, for that matter, of the entire subtribe, and exhibits marked variability in duration, leaf form, length of stipules, size and form of the glomerules, bracts, flower-size, and the form of the tepals as well as the structure of their awns and the anthers." Nevertheless, *P. ahartii* is easily distinguished from *P. arabica* and appears to be unique in the genus by virtue of the prominent, erect, bilobed apices of the sepals formed by the prolongation of the broad scarious margins beyond the awned herbaceous midrib. Its extremely reduced size is also unusual.

It might at first seem curious that a rare Californian endemic could have a Mediterranean progenitor. Nevertheless a comparable situation involving North American derivatives of a basically Mediterranean genus can be found in *Loeflingia*, as summarized by Barneby and Twisselmann (1971).

Paronychia franciscana Eastwood, the only other species of *Paronychia* in California, is considered to be introduced from Chile (Munz 1959). This species is a coastal, mat-forming perennial to 4 dm across, with herbaceous sepals lacking scarious margins. Confusion with *P. ahartii* is therefore not likely.

If *Paronychia ahartii* is indeed as rare as it appears to be, its continued existence is precarious. Not only is it restricted to the highly developed Sacramento Valley, but a reproduction rate of less

than ten seeds per individual does not bode well under any circumstances.

It is in response to Lowell Ahart's plea for a name to place in his checklist of the flora of his ranch that this species is finally being described. The epithet honors Ahart (b. 1938) not only for his persistence and interest in this inconspicuous plant, but also in recognition of his careful collections of the flora of the Sacramento Valley and Sierran foothills.

ACKNOWLEDGMENTS

The cooperation, encouragement, and advice of John Thomas Howell, Rupert Barneby (who helped with the Latin), James Hickman, and Lowell Ahart are all greatly appreciated. I am especially appreciative of the drawings done by Julia Larke.

LITERATURE CITED

- BARNEBY, R. C. and E. C. TWISSELMANN. 1971. Notes on *Loeflingia* (Caryophyllaceae). *Madroño* 20:398-408.
- CHAUDHRI, M. N. 1968. A revision of the Paronychiinae. *Meded. Bot. Mus. Herb. Rijks Univ. Utrecht* 285:1-440.
- MUNZ, P. A. 1959. *A California flora*. Univ. California Press, Berkeley, CA.

(Received 5 March 1984; accepted 19 July 1984.)